

CLEO Remote Shifting

Experiences on Remote Shifting with
the CLEO III detector

LEPP - Cornell University

CLEO Remote Shifting - Idea

- Project started January 2002
- Idea: physicist and operator tasks are separated: physicist does data quality monitoring and watches detector performance of CLEO III – operator keeps the system running, takes action in case of alarms
- Operator stays on site - Tools for physicist shifter are remotely usable do physicist shifts from a remote site
- Institutions, Universities are very interested, mainly to save travel costs and save time (easier to walk next door and sit down in front of remote session)

CLEO Remote Shifting

- Remote shifting certainly different from machine shifts (physicist: no control, only monitoring)
- In principle CLEO III detector is also remotely operable (except HV system), however not applied right now (e.g. missing alarms for gas and cooling systems)

CLEO Remote Shifting - Tools

- Front end read out code based on C++, running VxWorks and Solaris (CORBA/VisiBroker)
- User interface thru JAVA GUIs: SessionManager: Info on detector status and performance (histograms); Event display
- Remote Access via GateKeeper (= routes CORBA calls to clients thru HTML -> Web browser on the user side)
- VRVS as video conferencing system
- Test sites: OSU, U of Minnesota, U of Syracuse

CLEO Remote Shifting – Status

- VRVS works finally for test sites, own reflector at LEPP-Cornell, troublesome protocol for firewalls, not H.323
- GateKeeper even more troublesome to get thru firewalls, has to be routed from an internal protected subnet to a public server at LEPP
- Easy to talk local site/firewall administrator about access issues
- Very difficult and time consuming to get remote system and fw administrators to adapt fw and/or software on used PCs. Has to go through administrative hierarchy (at larger sites)
- Solution for fw: SSL existing (not tested), VPNs a better solution? Newer releases for GateKeeper (VisiBroker) allow more detailed settings

CLEO Remote Shifting – Status cont'd

- Tests/Real shifts done with OSU, University of Minnesota and University of Syracuse -> OSU worked,
- Syracuse works almost, Minnesota first not very well: bad OS, screwed PC setup (public PC)
- Remote setup has to be controlled and taken care of, too (OS, JAVA version, browser settings etc, personal fw settings...)

CLEO Remote Shifting – Status cont'd

- Communication with remote site administrators has to be established well in advance, often difficult, you have to know them, tied to security policies
- Social/Security aspect: fw admins don't reveal information to “users” on local/remote sites
- Secure design was not part of the design from the very beginning, security issues raised in importance since design and development
- Great interest of remote sites/institutions (travel costs)